



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,242	01/14/2004	James A. Bailey	Bailey 8-1-3	4363
46900	7590	10/26/2005		
MENDELSON & ASSOCIATES, P.C. 1500 JOHN F. KENNEDY BLVD., SUITE 405 PHILADELPHIA, PA 19102			EXAMINER NGUYEN, LINH V	
			ART UNIT	PAPER NUMBER
			2819	

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

72

Office Action Summary	Application No. 10/757,242	Applicant(s) BAILEY ET AL.	
	Examiner Linh V. Nguyen	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-18 is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 9-11 is/are rejected.
- 7) ☒ Claim(s) 4,8,12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to communication filed on 8/15/05. Claims 1- 18 remain in this application.

Response to Arguments

Applicant's arguments with respect to claim 1 have been fully considered and are persuasive. The previous rejection of claim 1 has been withdrawn. However, a new ground of rejection is applying to this office action.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1 – 3, 5, 6, 9 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Muza U.S. Patent No. 6,556,081.

Regarding claim 1, Fig. 1 of Muza discloses a circuitry comprising: a first differential transistor pair (M1, M2) connected between a first load device (M3) and a first current sink (I1), wherein: a first inductance-creating element (M11) is connected to the first load device (M12) to add inductance at a first output node (A1) of the circuitry; and a power-supply rejection element (D1) is connected between the first inductance-

Art Unit: 2819

creating element (M12) and a first voltage reference (AVDD) to provide power-supply rejection (Col. 4 lines 40 – 56) at the first output node (A2).

Regarding claim 2, Fig. 2 further comprising: a second load device (M4) connected to the first differential transistor pair (M1, M2); and a second inductance-creating element (M13) connected to the second load device (M4) to add inductance at a second output node (B1) of the circuitry, wherein the power-supply rejection element (D1) is connected between the second inductance-creating element (M13) and the first voltage reference to provide power-supply rejection (AVDD) at the second output node (B1).

Regarding claim 3, Fig. 1 further comprising a second differential transistor pair (M11, M14) connected between the first and second load (M3, M4) devices and a second current sink (I2,) such that the circuitry is adapted to provide a variable-gain amplifier function (M11 and M14 are adapted to adjusting the gain at the output nodes A1 and B1).

Regarding claims 5 and 9, Fig. 2 of Muza further comprising: a common-mode sense circuit (106) connected to the first and second output nodes (A1, B1) and adapted to generate a sensed common-mode voltage signal (signal at the input gates of M11 and M14); and a differential amplifier (M11 – M14) connected to receive the sensed common-mode voltage signal (Voltage at the input gate of M11, M12) and a desired common mode voltage signal (Voltage at input gate M12 and M13) and adapted to generate and apply a common-mode error-correction signal (common output of M12 and M13) to the first and second inductance-creating elements (M12, M13) to correct for

Art Unit: 2819

differences between the sensed input and the desired common-mode voltage signals (Col. 4 lines 40 – 56).

Regarding claim 6 and 10, Fig. 1 of Muza further discloses a first capacitor (C1) connected between the first output node (A1) and a second reference voltage (AGND); and a second capacitor (C2) connected between the second output node (B1) and the second reference voltage (AGND) such that the circuitry is adapted to provide a continuous-time filter function.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muza as applied to claims 5 and 9 above, and further in view of Hamano et al. U.S. Patent No. 5,510,745.

Muza as applied to claims 5 and 9 above does not disclose C1 and C2 are variable capacitors.

Hamano et al., Col. 19 line 48 – 50 further discloses a variable capacitor to control the frequency band.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the variable capacitor taught by Hamano

et al. into capacitors of Muza of for the purpose of providing a filter having frequency control function to the output of differential pair transistor.

Allowable Subject Matter

6. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach or suggests wherein when current through the first current sink increases, current through the second current sink is adapted to decrease such that total current through the first and second current sinks remains substantially constant to provide the VGA function with near exponential gain control.

Claims 8 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach or suggests wherein the power-supply rejection element comprises a current whose current is controlled by a control signal that is adapted to be adjusted to adjust equivalent resistance provided by the first and second inductance-creating elements.

Claims 13 - 16 and 17 - 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With respect to claims 13 and 17, the prior art does not teach or suggests the sources of transistors M1, M2, and M3 are connected together and to receive the common-mode error-correction signal; and

Art Unit: 2819

the gates of transistors M1, M2, and M3 and the drain of transistor M1 are connected together and to receive the current from current source I1.

Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh Van Nguyen whose telephone number is (571) 272-1810. The examiner can normally be reached from 8:30 – 5:00 Monday-Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Robert Pascal can be reached at (571) 272-1769. The fax phone numbers for the organization where this application or proceeding is assigned are (703-872-9306) for regular communications and (703-872-9306) for After Final communications.

10/20/05

Linh Van Nguyen

Art Unit 2819

A handwritten signature in black ink, appearing to read 'Linh Van Nguyen', is written over the typed name and unit.